Progression Skills in Design Technology Overview

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Developing, planning and communicating ideas	Design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, ICT. **[COMPUTING]**	Design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, ICT. **[COMPUTING]**	Use research and develop design criteria to inform the design of functional, appealing products that are fit for purpose, for individuals or groups. Generate, develop, model and communicate their ideas through discussion, and annotated sketches (4 design ideas / one final design). With growing confidence, considering the purpose and the user/s. Start to order the main stages of making a product (design, make, evaluate).	Use research and develop design criteria to inform the design of functional, appealing products that are fit for purpose, for individuals or groups. Generate, develop, model and communicate their ideas through discussion, and annotated sketches (4 design ideas / one final design – showing size to the nearest cm). With growing confidence, considering the purpose and the user/s. Start to order the main stages of making a product (design, make, evaluate).	Use research and develop design criteria to inform the design of functional, appealing products that are fit for purpose, for individuals or groups. Generate, develop, model, communicate ideas by discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design (4 design ideas / one final design – showing size to the nearest ½ cm). [COMPUTING] With growing confidence, apply a range of finishing techniques, including those from [ART & DESIGN]. With growing confidence, select appropriate materials, tools and techniques. Start to understand how much products cost to make and how much they can sell them for to make a profit.	Use research and develop design criteria to inform the design of functional, appealing products that are fit for purpose, for individuals or groups. Generate, develop, model, communicate ideas by discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design (4 design ideas / one final design – showing size to the nearest mm) . [COMPUTING] Accurately apply a range of finishing techniques, including those from [ART & DESIGN]. Plan the order of their work, choosing appropriate materials, tools and techniques. Develop an understanding of how much products cost to make and how much they can sell them for to make a profit.
Construction Materials - Working with tools, equipment, materials and components to make quality products	Use a range of joining techniques (e.g. gluing, hinges or combining materials to strengthen, stiffen or make more stable). Cut materials safely using tools provided.	Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms [e.g. levers, sliders, wheels and axles], in their products. Begin to select tools and materials; use correct vocabulary to name and describe them. Learn to use hand tools safely and appropriately.	Cut and shape materials accurately and safely by selecting appropriate tools. Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (e.g. slots or cut outs). Explain their choice of tools and equipment in relation to the skills and techniques they will be using. Start to think about their ideas as they make progress and be willing to change things if this helps them to improve their work.	Select a wider range of tools and techniques for making their product safely. Measure and mark out to the nearest cm. [MATHEMATICS] Select appropriate joining techniques. Understand how more complex electrical circuits and components can be used to create functional products (for example, series circuits incorporating switches, bulbs, buzzers and motors). [SCIENCE] Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment (including ICT).	Cut materials with precision and refine the finish with appropriate tools (e.g. sanding wood after cutting or more precise scissor cuts after roughly cutting out). Construct a product using an appropriate mechanism (e.g. levers, winding mechanisms, pulleys and gears). Measure and mark out to the nearest ½ cm. [MATHEMATICS] Select appropriate materials, tools and techniques e.g. cutting, shaping, joining and finishing, accurately.	Construct a product using innovative combinations of electronics (or COMPUTING) and mechanics. Measure and mark out to the nearest ½ cm. [MATHEMATICS] Confidently select appropriate tools, materials, components and techniques and use them. Demonstrate how to use skills in using different tools and equipment safely and accurately with growing confidence cut and join with accuracy to ensure a good-quality finish to the product.

Evaluating processes and products	Explore and evaluate a range of existing products. (use/try - orally explain what they like and dislike about products and why.) Evaluate their ideas and products against design criteria making improvements where necessary (photo with tick box evaluation).	Explore and evaluate a range of existing products (use/try). Evaluate their ideas and products against design criteria making improvements where necessary (photo with answering questions evaluation).	Investigate and analyse a range of existing products (use/try). Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work (scaffolded paragraph).	Investigate and analyse a range of existing products (use/try). Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work (scaffolded paragraph).	Investigate and analyse a range of existing products (against a pro-forma). Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work (modelled paragraph). Understand how key events and individuals in design and technology have helped shape the world.	Investigate and analyse a range of existing products (against a pro-forma). Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work (modelled paragraph). Understand how key events and individuals in design and technology have helped shape the world.
Food and Nutrition	Prepare ingredients safely and hygienically (using techniques such as cutting, peeling and grating). Assemble or cook ingredients. Begin to understand that all food comes from plants or animals. [SCIENCE] Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught. [SCIENCE] Begin to understand that everyone should eat at least five portions of fruit and vegetables every day. [SCIENCE]	Prepare ingredients safely and hygienically (using techniques such as cutting, peeling and grating). Measure or weigh using measuring cups or scales. [MATHEMATICS] Assemble or cook ingredients. Understand that all food comes from plants or animals. [SCIENCE] Know that food has to be farmed, grown elsewhere (e.g. home) or caught. [SCIENCE] Know that everyone should eat at least five portions of fruit and vegetables every day. [SCIENCE]	Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Measure ingredients to the nearest gram. [MATHEMATICS] Assemble or cook ingredients. Understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'. [SCIENCE] Know that to be active and healthy, food and drink are needed to provide energy for the body. [SCIENCE]	Develop an understanding on how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Prepare ingredients safely and hygienically using appropriate utensils. Follow a recipe measuring ingredients accurately to the nearest gram. [MATHEMATICS]	Know how to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Understand the importance of correct storage and handling of ingredients. Create and refine recipes including ingredients, methods, cooking times and temperatures – measuring dry ingredient, liquids and time accurately. [MATHEMATICS]	Understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. Create and refine recipes including ingredients, methods, cooking times and temperatures – measuring dry ingredient, liquids and time accurately. [MATHEMATICS]
Textiles	Shape textiles using templates.	Join textiles using running stitch.	Join textiles using back stitch.	Select the most appropriate techniques to decorate textiles (e.g. dyeing, printing, adding sequins).	Create objects with a seam allowance (e.g. cushion etc...). Begin to understand how to pin, sew and stitch materials together to create a product.	Join textiles with a combination of stitching techniques (e.g. back stitch for seams and running stitch to attach decoration). + With confidence pin, sew and stitch materials together to create a product.